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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,193	11/19/2001	Manuel Barbosa	1356-039 (9908)	8121

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PONTIAC, MI 48342

EXAMINER
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NGUYEN, XUAN LAN T

ART UNIT	PAPER NUMBER
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3683

MAIL DATE	DELIVERY MODE
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08/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

09/988,193

Applicant(s)

BARBOSA, MANUEL

Examiner

Lan Nguyen

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 25-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 25-31 and 33-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. in view of JP 63-45229, (from here on will be referred as Document '229).

Re: claim 25, Buchholz shows a lightweight two-part backing plate for a drum brake assembly, as in the present invention, the backing plate including: a shield plate 5 for supporting and shielding components of a drum brake assembly, and an abutment plate 4 attached to the shield plate and located on an interior portion of the shield plate and being configured to resist braking forces, the abutment plate comprising: an upper portion includes a plurality of mounting features, bolt holes 16, for mounting the abutment plate to an axle housing of a vehicle, a lower portion having a shape generally corresponding to an anchor block 8 of the drum brake assembly and configured to engage and resist braking forces from brake shoes, and an intermediate portion located between the upper and lower portion, and the width of the lower portion being less than the width of the upper portion as shown; wherein the combination of the shield plate and abutment plate reduce vibration of the drum brake assembly while providing sufficient

resistant braking forces applied by the brake shoes. Buchholz lacks the shield plate having a thickness of 0.8 mm to 1.8 mm and being formed of a damped steel comprising: a first and second steel layer, the thickness of the first and second steel layer being approximately equal, and an intermediate layer located between the first and second layer, the intermediate layer being formed of viscoelastic polymer; and the abutment plate having a thickness of 3 mm to 6 mm and having a generally square shape and located on an interior portion of the drum brake assembly. Document '229 teaches the concept of using damped steel in the construction of a shielding plate 10 in order to further reduce noise and vibration from braking operations wherein the damped steel comprises a first and second steel layer, the thickness of the first and second steel layer being approximately equal, and an intermediate layer located between the first and second layer, the intermediate layer being formed of viscoelastic polymer in combination with an abutment plate 9 being located on an interior portion of the drum brake assembly . It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Buchholz's backing plate assembly to comprise the material of damped steel as taught by Document '229, since it is proven that damped steel is excellent in dampen noise and vibration as taught by Document '229. With regards to the shape of the abutment plate and the dimensions of the abutment plate and the shield plate, these claimed features are considered to be engineering design choices wherein these choices can be selected to achieve a desired level of dampening. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Buchholz's brake assembly to

comprise the abutment plate and shielding plate with certain thicknesses and shape in order to satisfy different requirements of each application to dampen the required vibration and noise.

Re: claims 26, 27, 29, 30 and 31, the thicknesses of the steel and the damped steel, and the shape of the abutment plate are considered to be engineering design choices and would depend on the requirements of each application to dampen the required vibration and noise as mentioned above.

Re: claim 28, Buchholz shows the abutment plate includes one or more anchors 8 for resisting movement of brake shoes of the drum brake assembly.

Re: claims 33 and 34, Buchholz shows the shield plate 5 and the abutment plate 4 are formed separately, wherein the shield plate 5 is configured to support a hydraulic cylinder 9 of the drum brake assembly.

Re: claim 35, the discussion of the rejection of claim 25 meets the claim limitations of claim 35 except Buchholz's shield plate shows the circumferential lip to be extending in the opposite direction of the claimed circumferential lip in claim 35. Document '229 further teaches the shield plate 10 to comprise the circumferential lip extending in the direction as claimed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Buchholz's shield plate to comprise the lip extending in the direction as taught by Document '229 so that the shield plate would protect the drum's exterior and further dissipate vibration as taught by Document '229.

Re: claims 36 and 37, Buchholz shows in figures 3 and 5, the shield plate 5 and the abutment plate 4 comprising a plurality of surfaces as claimed.

Re: claims 38, 40 and 41, Buchholz shows the relationship of the shield plate and the abutment plate as claimed in figures 3 and 5.

Re: claim 39, figure 3 of Buchholz shows the upper portion and the lower portion of the abutment plate to be located on different planes.

Re: claim 42, the discussion of the rejection of claims 35-41 meets all the claimed limitations of claim 42.

3. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Buchholz et al. in view of JP 63-45229, (from here on will be referred as Document '229) and further in view of Ludke et al. (USP 5,896,958).

Buchholz's backing plate, as modified and as rejected in claim 25, lacks a mounting hole defines by the abutment plate for receiving an antilock braking sensor. Ludke teaches in figure 2 a two part backing plate comprising a shield plate 22 and an abutment plate 10 to resist the braking force wherein the abutment plate 10 defines a mounting hole for mounting an antilock braking sensor 46. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified Buchholz's backing plate to comprise a hole for mounting an ABS sensor as taught by Ludke in order to provide a reliable location for an ABS sensor.

#### ***Response to Arguments***

4. Applicant's arguments filed 7/5/07 have been fully considered.

Applicant's amendment to claim 25 has rendered the drawings objection and the rejection based on 112, 1<sup>st</sup> paragraph moot. Hence, the drawing objection and the rejection have been withdrawn.

Applicant's amendment to claim 31 has overcome the rejection based on 112, 2<sup>nd</sup> paragraph. Hence, the rejection has been withdrawn.

Applicant argues that there is no teaching in the prior art that the dimensions and the shapes as claimed are obvious engineering design choices. Cited prior art, patent 5,842,686 to Hansen et al., teaches in column 5, lines 12-15, that thicknesses of layers of materials comprising the damped steel can be varied according to different needs. Moreover, MPEP 2144.04, section IV, shows that changes in sizes and/or shapes are obvious design choices.

**A. Changes in Size/Proportion**

*In re Rose*, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.); *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.).

In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), *cert. denied*, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

**B. Changes in Shape**

*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) (The court held that the configuration of the claimed disposable plastic nursing container was a matter of choice which a person of ordinary skill in the art would

have found obvious absent persuasive evidence that the particular configuration of the claimed container was significant.).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Xuan Lan Nguyen/ 8/8/07  
Primary Examiner  
Art Unit 3683